
Program Letter

September 13, 1996

Tank Penetration Below Product Level

Tanks installed under the regulatory requirements of Wisconsin Administrative Code ILHR 10 - Flammable and Combustible Liquids, require among other things that they be U/L listed and comply with *current* U/L requirements. Until very recently, it was the presumption of the department that all U/L Listed tanks associated with Applications for Installation of Aboveground Tanks were conforming to the provisions of the listing. Submittals were not rejected due to piping and manway location, or consideration of a manway being shown on the plans or in place at time of installation. During conversations with various tank manufacturers and installers it was brought to the department's attention that tanks are being installed that were not configured in accordance with U/L requirements. We were also made aware that these sites had in fact received a *Conditional Approval* based upon the presumption and condition that *all* requirements of ILHR 10 are met, including conformity with U/L Listing. This and other questions regarding the department's interpretation of the U/L Standards prompted a meeting with U/L. Jerry Holton and Sheldon Schall met with U/L Engineer Tom Skowera. Among the topics covered were the requirements for access manway on vessels exceeding 5,000 gallons, and the penetration of double wall tanks below maximum product levels.

The department's interpretation is in concert with the position of U/L. A penetration below maximum product level on a double wall tank requires the tank to be placed in containment. Flammable or combustible liquid tanks listed by U/L are evaluated on the basis that the tanks will be installed in accordance with NFPA 30. NFPA 30-2-3.4.1 specifically addresses double wall tanks having fittings below the maximum liquid level, and requires that they be located within containment. The commentary included with the text version of NFPA 30 states that the technical committee determined that a double shell alone would not provide the level of spill control intended. The commentary also states that almost all releases from aboveground tanks result from overfilling or a break in a pipe connected to the tank. Tank drains, as noted in U/L 142 par. 10.1 and 10.2, must be designed to U/L specifications for the respective double wall or single wall tank. A drain *shall not be used* to load or unload the tank. This position is based upon NFPA 30, 2-3.4 (1993) and U/L 142 Edition 7.

U/L 142 requires a manway on *any* tank that is greater than 5,000 actual gallons capacity. Multi-compartment vessels require a manway only on those compartments that exceed 5,000 actual gallons.

The U/L Listing is limited to what is in place at the time the tank leaves the manufacturer. Some "add-ons," such as tabs, may be allowed to be put on the tank if they have very little or no weight or stress on the tank. However, these "add-ons" may become a problem if for example, they are used to secure a ladder which is not part of the listing. The regulator is responsible for how an issue is addressed after the tank leaves the manufacturer. In specific situations a DILHR Material Approval may allow an application which is not included in the U/L Listing. The department requires that all tanks *meet compliance based upon installation date, not date of manufacture*.